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ABSTRACT

There is a growing demand for career guidance to be delivered by computers. Recruiters feel that college career centers should keep up with technological advances of the business world. A survey by Behrens and Altman (1998) found that 80 percent of college students would rather gain career information from a computer than a book. The implications of the changing content are far reaching. Tait (1999) describes two categories of concern. The first questions the value to the client of the one-to-one interview, and the second questions whether all resources can be safely left to the client's understanding and control. The paper concludes that the human-machine contrast is not helpful as a guide to policy. In considering the implications for practitioner training, the primary concern is whether or not counselors know how to use the system. The paper questions whether career counselors of the future should be prepared to create their own Web pages, evaluate Web sites, participate in careers guidance-related listservs, and use computer-assisted guidance programs of all kinds. It will also be important for counselors to improve their genuinely human guidance skills, something that cannot be replaced by technology. (Contains 19 references.) (JDM)

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The Impact on Career Delivery Services of Information and Communications Technology

By

Marcus Offer

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4. THE IMPACT ON CAREER DELIVERY SERVICES OF INFORMATION AND COMMUNICATIONS TECHNOLOGY

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Imagine for a moment, the following scenario.

> It is 2020. A giant bubble of plasma from the surface of the sun produces a magnetic storm that hits the earth and, running along power lines, knocks out electricity power stations all over the northern hemisphere, without injuring most human beings who, at the time, are indoors, in bed, with the lights out. After a week, power is generally restored, but it is discovered that by some odd accident, the surge of power has irrevocably damaged all computer equipment in the affected area, making it unusable. A terrible cry goes up from everyone: "Whatever shall we do about career delivery services without computers?"

This is a ridiculous story, of course, for two reasons. First, there are many vital and essential uses of information and communications technology (ICT) and supporting "career delivery services" is not one of these. Second, in 2020, there will still be people around who remember what we used to do before the computer came on the scene. We used to talk to people, find out what questions they wanted answered, agree with them on what their needs were and then try to meet those needs by advising or counselling them. We would draw on our own stocks of information and experience, or those of our colleagues, refer them to others who could help them if we could not, or even point them to some useful books or leaflets that might contain answers to their questions. We also arranged for them to undertake work experience, or get specific education or skill training to help them reach their goal. Sometimes, we would even arrange an interview for them with an employer, having first helped them write a résumé and draw up a persuasive letter of application. In short, we functioned quite well without a computer. What has changed?

The Current Situation

One obvious change has been the level of demand for careers guidance to be delivered by computers. In 1997, Behrens and Altman (1998) did a survey of approximately 630 career counsellors, 650 recruiters and 180 students, mainly in the mid-west United States. The survey showed that in that part of the world, the career centre was "wired." Internet access for students was

available in 86 percent of centres, and 93 percent of respondents indicated their career centre hosted at least five of the following services:

- a career guidance system;
- computerized job bank;
- résumé writing program;
- résumé-job matching program;
- on-campus interview scheduling program;
- video/distance interviewing program; or
- direct Internet access for students.

In addition, one third of the respondents added that they had received "other" Internet-based services, including Web registration, career development workshops on the Web, real-time Web interviewing, and a Web-based alumni networking data base. Although these services are still not typical, the survey report suggested increasing speeds of Internet access could make such on-line services the norm instead of the exception. Obviously, such high tech centres would be badly hit by the solar flare in 2020! One remembers, ironically, that the Internet was originally invented, in part, to prevent a whole military network being knocked out by an enemy nuclear strike.

The Behrens and Altman (1998) survey demonstrated that the demand for ICT services is there. The professionals among the survey's respondents believed their clients and customers wanted access to ICT and expected career centres to be technologically capable of delivering that type of service. Many added that their administrators were mandating the increasing use of technology in the career centre. Moreover, two thirds of the recruiters surveyed said they used corporate Web sites to source candidates, while more than half used at least three of the following: company Web site, résumé scanning, interview scheduling systems, video/distance interviewing or a Job Trak program. Others used e-mail to broadcast news of vacancies to listservs or had computerized data bases of applicants. Three out of four recruiters preferred career centres offering state-of-the-art placement and job matching technology. The vast majority thought college career centres should try to keep up with the technological advances of the business world.

What of the students? Behrens and Altman (1998) found that 80 percent would rather gain information from a computer than from a book or a person, 85 percent would rather use a computer program to help them develop a résumé, and 70 percent thought computers could help them find jobs much faster than would traditional job search methods. But when a job search doesn't work out, 75 percent would rather discuss that frustration in a face-to-face counselling session than via a video hook-up, and 90 percent would rather get personal feedback from a career counsellor than from a computer when practising interview techniques.

It is obvious that not all guidance seekers, even in the United States, are as well provided for as those described by Behrens and Altman. However, demand is growing, and expectations will drive the pace of change in all countries. Commercial and industrial investment drives change as well. Much of the development on the use of ICT in careers guidance is driven, not by a defined need, but by a perspective that says "because it's there and we can do it, we should do it." On top of that, there is the need to stay current, to retain professional credibility with clients and so on. In western industrialized countries, such demands are fuelled by continuing media hype and by the figures for increasing Internet access which seem to show that if you're not on-line you're not part of anything important. There also is a spirit of competition: if the careers service next door offers guidance with more technological panache than you, won't you be perceived as one of the also-rans and no longer "leading edge?" This is particularly acute in a country such as the United Kingdom where careers service companies are potential competitors with each other.

The impact on less affluent areas of the world remains to be seen. The situation in careers guidance merely echoes the widening gap between rich and poor in all aspects of life. If we believe in the importance of tackling social exclusion, perhaps we should be seeking active and interventionist ways of ensuring our uses of, and access to, technology do not further undermine community and solidarity.

Implications of the Changing Context

In one sense the technology itself offers us a way forward. A principal impact on guidance has been the increased range over which any guidance service or resource can be delivered via the Internet. Potentially, any careers adviser or counsellor worldwide can be consulted via this medium. Thus, geographical isolation or lack of transport ceases to be an insuperable obstacle as long as there is a community centre or a neighbourhood cyber café with access to the Net. Specialist services that would have meant a long and expensive journey to consult in the past, can now be made as accessible as the books on your living room shelf, and support from others with similar problems can be had over great distances. Many countries in Europe now have public vacancy data bases on the Web sites of their ministries of employment or labour, and some have set up associated discussion forums for job seekers to exchange information. There are many self-help therapy groups, too, that offer a model for what might be possible in career counselling. ICT can include as well as exclude.

In fact, the most recent impact of ICT for careers work has been on delivering guidance at a distance — even via e-mail, perhaps the least glamorous of the ICT options. It is now commonplace to set up links among students from institutions in different countries, but one could also bring in

occupational specialists from afar, deliver group guidance using facilitators and participants from different countries, and set up international role plays. Because of the asynchronicity of this medium, contacts across time zones are made possible as well.

In short, we have a vastly increased range of experience and conversations available in guidance, and the barriers of place and time are significantly reduced. Tait (1999) adds that this includes all the places where it is possible, as a learner or client, to work in the guidance and counselling process. This could be the home, library, community centre or careers or counselling centre. He argues that we should re-examine the assertion that people can only be adequately helped with deeply personal aspects of career decision making by face-to-face counselling. Tait describes the assertion from traditional careers guidance practice as vulnerable to notions of the value to the client of the familiar one-to-one interview. Tait distinguishes between two categories of ICT: those involving interaction between individuals and groups at a distance, and those delivering sources of information and virtual experience. Distance itself, as he points out, is a metaphor, the meaning of which needs to be discussed. Clients may be working at a distance in the literal sense. In a metaphorical sense, distance may also be diminished by the new technologies. This discussion is not an entirely new one, but continues themes from telephone counselling and support for learners by radio, television or via the mail. In some ways, modern career delivery services have to learn to work more like the United Kingdom's Open University and other advocates of "remote" learning and teaching, where new technologies are an extension of principles of good practice, honed over the years in older forms, and combining local support with increased specialist input.

Tait's second category raises particular concerns for many practitioners. The delivery of guidance resources, or virtual experience, at a distance raises the question: Can all resources be safely left to the client's understanding and control or do some need direct intervention by a counsellor or guidance specialist? Research seems to show that computer-assisted guidance is used most effectively in a supported situation, integrated with other guidance activities and structures (e.g., Hunt, 1994). The concern affects the use of free-standing computers in public areas, such as libraries or community centres, to increase public access to information and guidance sources, but it applies even more to resources delivered over the World Wide Web.

It depends, of course, on what is being delivered. A test of intelligence or ability administered in this way would raise serious doubts about standardized administration, and the reliability of the results, without some special measures being taken, but this is an extreme case. Typically, it is information about courses or occupations, labour market information, employers and vacancies that is made available through ICT. Sometimes,

the information is augmented with general advice about decision making, preparation for a job search, handling selection interviews and writing a résumé. So far, there seems no reason to object. Most of this material already exists in books, pamphlets and magazines, against which few objections are raised. The grey area is probably in the field of (self-) assessment. Interest and personality inventories, learning style and skills questionnaires are all on the World Wide Web. The possibility of misinterpretation and unreliable or invalid results clearly exists for a variety of reasons, including cultural differences in norm groups, non-standard administration and inappropriateness of the instrument for the person using it.

This is one place where career delivery services have to adjust to a new context. The arguments for supporting such tools are strong, but they don't address the fact that, ultimately, it is impossible to control what is presented on the Web, how it is used and in what situations. For example, in the United Kingdom, several computer-based careers information systems are available for in-home users or via Web-based versions. Recent conversations with suppliers suggest this is a growing trend. Many guidance seekers, not to speak of middle-class parents, will no longer need to wait to be invited to an interview with a careers counsellor. They will have the means to address many of their needs themselves "at the kitchen table."

Reactions to ICT in Career Guidance

There are several practical responses to this development. First, the notion of "support" for guidance and career decision making via ICT can be seen as a continuum, with a range of increasingly supported or autonomous situations. The support can take many forms. As Offer and Sampson (in press) point out:

> [Y]ou can support information in a variety of ways: a computer-assisted careers guidance system (CACG) that stands alone in a careers library is supported thereby much more than one that stands alone in a youth club, shopping centre, or bus station! If some thought has been taken to ensure that the occupational or interest categories used in the CACG system are the same as, or echoed in, those used in the paper-based resources of the library, and this fact is pointed out by the system or by a notice nearby, this is an even more supported situation. If, in addition, the people who use the system have already taken part in a careers education or group guidance programme, then support has increased yet another level. Finally, if there is a self-diagnostic menu system front-ending the use of the CACG and an option to call up a telephone or videoconferencing link with a careers adviser while using the CACG in case of difficulties, then support may be complete without any "personal" contact with an adviser.

Second, there are strong attempts from several sources to set quality standards for delivery of guidance (including information, assessment or counselling) via ICT. Examples include the Canadian Labor Force Development Board (1998), the Association of Computer-Based Systems of Career Information (ACSCI, 1992) and the National Career Development Association (NCDA, 1997) in the United States. In the United Kingdom, a working party of the National Advisory Council for Careers Education and Guidance came to the conclusion that ICT-based guidance needed no additional criteria for quality control other than those for guidance in general. Indeed, the party added additional measures for deciding whether these criteria had been met. On the other hand, it was argued that guidance via the Internet should be covered by an additional set of standards for *guidance at a distance generally*, rather than standards specific to the use of ICT. In other words, ICT may raise the issue, but it is a professional guidance problem, not a technological one, which includes situations that can be brought about without using a computer at all. In any case, quality standards must not only be set, but made public in a way that enables the consumer to use them to judge the quality of what they are offered. Providers of guidance services, and suppliers of ICT resources, must be able to check that their services and products will pass the test. There is a need for regular review and monitoring, and the publishing of results, in the same way consumer organizations campaign to raise standards in the provision of goods and services in general.

Third, the word "consumer" indicates a longer term approach consistent with careers education. Even the best quality material can give rise to misuse or misunderstanding in an unmediated situation. Users must be educated in its use. One aim of such education should be to have critical users of ICT and guidance, who are capable of scrutinizing information on a Web site for its validity and reliability, look for signs of bias and corroborating evidence from other sources before relying entirely on output from one assessment measure. Such qualities are not only valuable in a career decision-making context, they represent a broader set of skills relevant to citizenship in a mature democracy. They do, however, require a commitment to traditional democratic and liberal values in education generally.

Nevertheless, some advisers still see the unsupported use of computer-assisted guidance and the Internet as a threat. As Watts (1996) pointed out, computers in guidance have the potential for moving guidance away from professional control. He also (Watts, 1993) questioned whether such concerns reflect staff self-protection in a time of declining resources or a genuine desire to protect individuals from the misuse of systems. There is the residual fear around "will it cost me my job?" This is not, of course, entirely unfounded. Behrens and Altman (1998) found a correlation between the level of sophistication of a career centre's Web site and drop-in student

activity at the centre. They also found that traditional lower level jobs in career centres are being lost as technology takes over the more basic administrative tasks of the centre.

Behrens and Altman continue by saying that those in upper level positions believe technology could take over as much as 50 percent of their current job responsibilities. At the same time, technology is seen as increasing the work load of people-oriented counsellors striving to keep up to date with the latest computer developments. There is no reason why careers guidance should be exempt from the effects of the flexible labour market experienced by clients. But, would we really want to be advised by people who were actually more worried about their job than ours? Perhaps another quality standard needs to be written here.

Such reactions may have deeper roots. Guidance and counselling experts may fear losing control over their expertise to the expert system. The construct human versus mechanical is a powerful emotional dichotomy that surfaces rapidly in discussions of computer-assisted guidance. There is a less intense reaction to books, videos or audio tapes, which are clearly seen as less threatening to the professional's own position. These are merely information resources. While computer programs restrict themselves to information management and retrieval, they are not a threat. They do not offer a substitute for the counsellor's expertise.

This is not just a psychological issue. Governments and their officers are sometimes attracted to computers as a cheaper way of delivering guidance when compared to using trained specialists. Counsellors are aware of this and eager to defend their territory. The situation is actually much more complex. Since the arrival of the Internet, the computer can actually enhance the reach of careers counsellors by videoconferencing, e-mail, chat rooms and similar communicative facilities. The machine can support and extend the human. Such contact also can enable human counselling to reach people who would otherwise have avoided using guidance services at all. In fact, as Sampson et al. (1997) point out, contact by e-mail or videoconference can be a preliminary to face-to-face contact — a preparatory stage of the process, rather than a substitute for it. Instead of detracting from the value of guidance, it renders guidance more flexible and responsive to individual needs.

On the other hand, there are some things the computer may actually be better at than its human counterpart (e.g., storing and retrieving data, scoring a test result without error, ignoring irrelevant characteristics of the human user when giving feedback), provided it has been properly programmed in the first instance.

Yet, even the apparently simple process of information storage and retrieval conceals some subtleties. Do we really understand how "data" becomes "information" in the mind of a user? Boreham and Arthur (1993) pointed out that the personal knowledge base of the decision maker is important in determining whether information would be used. Data, in other words, has to enter into a relationship with what is already in the mind and heart of the user, to become information. It has to make a difference, and the person has to see it as relating to what is already known, as extending, defining or modifying it further. Meaning is constructed in the process, not in the software itself. The software can only try to anticipate the construct systems of human beings. That is not something the present generation of computer-assisted guidance programs, on or off the World Wide Web, does very well. However, at the same time, we should ask ourselves how often the average careers adviser manages the "meaning-making" process either! It is not a basic skill for most careers advisers or counsellors.

Ultimately, the simple human–machine contrast is not very helpful as a guide to policy. Computers can reduce some kinds of inquiry at careers centres, but may increase others, as with people who realize, after some initial computer exploration, that their question is more complex than they thought and they refer themselves for human help. What is really needed is a way of sorting out which cases are, and which aren't, appropriately helped by computer-based interventions and which require a certain level of human support.

At the Center for the Development of Technology in Counselling and Career Development, (Sampson and Reardon, 1998) the protocol is for clients to engage in a brief diagnostic conversation with a guidance counsellor before any use of the Computer Assisted Guidance System (CAGS). There is follow-up during or after the session by the counsellor who acts as a supervisor and resource person for any client working with CAGS. The readiness of the client to use a particular CAGS may be assessed by a psychometric diagnosis, for example, Career Thoughts Inventory or CTI (Sampson et al., 1996), where the counsellor judges whether the client's needs are appropriate for immediate use of CAGS. The CTI helps to determine whether users of guidance are decided, undecided (could make up their minds if given some help but have no essential problems) or indecisive (need full "case-managed services"). Not everyone will be happy with the idea of counsellor as expert conducting a triage with clients, but if we think of it as contracting with the guidance user about what services and resources may be useful, it becomes simply good manners. It helps us avoid thrusting unwanted services on customers and gives attention to those who need it. This may also help fulfil the state's requirement to be economical and efficient, directing resources to where they are most needed.

Such a model sits well with the traditional walk-in careers centre, but on the World Wide Web the wealth of resources is infinite, and there is seldom a counsellor at hand to contract with a user. The diagnostic conversation, itself, becomes an unsupported tool. Sampson's model suggests the need to assess readiness and the degree of complexity in a client's objective situation. To this vertical dimension, we need to add a horizontal one: Where is the client in the guidance and decision-making process? What steps has the client taken and what resource or Web site can sustain the next phase of the cycle? Regardless of one's model of decision making, it is important to assess a client's progress through the decision-making process. This would permit the development of a matrix where the possible way stations in the decision-making process were the columns of the matrix and the rows were the levels of service or of readiness for use of ICT. Each cell of that matrix represents a particular state of need that we may decide is worth providing resources to meet, whether human, print-based or electronic (Offer, 1995). This could be a tool for quality control (Have we got all the cells covered, and with what, and why?) or for staff development and training (What would you draw on to meet such a need, and what diagnosis links with what resources?). However, the ultimate utility would be as a representation, in schematic terms, of a contract between a guidance practitioner and a guidance seeker. (What do you want help with? Is that the same as what you need? How can we address the issues in the time available? What resources are best suited to the task?)

Conclusions and Implications for Practitioner Training

This brings us back to "guidance at a distance." It has been suggested that it is the impact of the World Wide Web that has begun to sharpen our thinking about menus and "front-ends" and home pages, and other mediating devices between users and data. Even supposing the user is ready and knows what he or she is looking for, the data resources on the Internet are different from those on an orderly free-standing data base. The initial experience of the Internet is often expressed as serendipity or, more negatively, trial and error. Now guidance, it is suggested, is justified precisely because it helps reduce trial and error. That is our ultimate raison d'être in so far as we enable people to get where they want to go without the loss of time and energy that could be more creatively deployed to other ends.

It may be exciting to walk into a vast store of books, knowing the one you want and cannot get elsewhere is certainly there. Days later, when the fact that the library doesn't have a catalogue has dawned on you and you realize most books are stored by rough and haphazard association, the excitement wears off, and the sheer difficulty of continuing to hunt for what you need may deter you from continuing your search. You know all that stands between you and your goal is trial and error, and trial and error, and trial and error. Anyone who has started to use a search engine by typing in

"careers" and then been confronted with several thousand possible hits, knows what this feels like.

The Internet is not just a new tool. It is also a more recent outbreak of an older problem we thought we had licked—making the incoherent, coherent, and reducing trial and error. At different rates, guidance services and related organizations are responding to this, with gateway sites, carrying links to researched and validated resource sites. Signposts are being set up, groups of guidance users with similar needs are grouping to share information among themselves, and menu systems and diagnostic exercises are being developed to help the user determine, at the start, which way is most likely to lead to their goal. This is a natural human process of bringing order out of the wilderness. It is a natural task of career delivery services, too.

The ordering systems, however, are built on the assumption that guidance counsellors themselves know where they are going, when they step out of the spaceship into cyberspace. The U.K. guidance council's working party on quality standards in the use of ICT in careers guidance decided that, of all the proposed criteria for quality, one was paramount: Did the staff, when you asked, seem to know the systems they were using and were they able to answer your questions about these systems? Everything else seemed to flow from that question.

Should careers counsellors of the future (or perhaps even the present) be able to prepare their own Web pages, evaluate Web sites, subscribe to, participate in and sign off careers guidance-related listservs or mail bases, use computer-assisted guidance programs of all types to aid clients and be able to use search engines? A similar list was recently proposed by the ACES Technology Network (Hohensil, 1998) as a requirement for students completing a counsellor education program. Many of my counsellor educator colleagues would faint at the idea. But, not so long ago, perhaps as little as 10 years ago, just switching on the computer was a daring act for some of them. Careers advisers did not come into the job to interact with machines, though they had never troubled themselves about the telephone, and some learned to program a video recorder and use an overhead projector to support their presentations.

Over and above the basic technical skills, there is a need to acquire the new competencies associated with doing familiar things in an unfamiliar way. A careers adviser knows how to conduct an individual guidance interview. But, can he or she do it over a videoconference link? It is not so different. It is the range of the performance criteria that has changed. Using e-mail to deliver guidance services is more demanding because speech and gesture used to create rapport don't necessarily translate into writing skills.

According to Poulos (1997), today's on-line professionals may suddenly find themselves in a situation where the written word is evidence of the quality of one's professional expertise and finesse. The qualities looked for in face-to-face and telephone communication — voice tonality, pitch and timbre — no longer apply with e-mail and on-line conferencing.

When one adds the possibility of group guidance delivered this way, we are into very new worlds. How do you facilitate a group on-line, in asynchronous mode, where several threads of discussion are going on at once, and responses to any statement may take 24 hours to appear? Yet it is worth training to do it, because to support guidance at a distance may require this. If we want to be where the decisions are made, then sitting in a careers centre waiting for someone to turn up and ask a question, isn't going to be very efficient. Again and again, the old issues come back to us in a new guise: What we always referred to as "outreach" (approaching communities and individuals who would not by themselves access careers guidance) is not actually a new way of doing things when it is done in cyberspace.

The second strand of this training requirement for guidance counsellors is, paradoxically, the need to improve their genuinely *human* guidance skills. The machine has challenged us to define our competence in this area. There is no point in trying to do what a machine can do better, but what exactly is it, that is uniquely human about what *we* do, and how well do we do it? As I said previously (Offer, 1993), to say that clients want "personal contact" is not enough. Why do they want personal contact and what does it contribute to the outcomes of guidance that a computer could not give them? Now, I might add, we should also realize we can use the technology to give "personal contact" to more people over much greater distances, at the times and places where they want it.

Thus, there is both a promise and a threat, and we need well-educated counsellors to deal with either. The machine is not actually immune from criticism. While a computer program may present a slicker interface in more attractive packaging, it is arguable that computer-assisted guidance has not advanced dramatically in the last decade in terms of its content (Offer, 1992). Systems developers have put most of their efforts into developing Windows-based versions of their programs. This has sometimes been at the expense of a more sophisticated approach to assessment. Watts (1996) comments that in comparing the computer to the counsellor, the computer at least can deliver assured, consistent standards. This is, of course, true, with the emphasis on "can." Often, what is on computers today — labelled as self-assessment — does not present evidence of its validity or reliability, and ignores such issues as measurement error. Many users, and professionals, too, still treat such systems like "speak your weight" machines. Sampson (1992) has commented that when he's asked system developers why professional manuals do not typically contain the full range

of validity and reliability data that exist for some systems, developers respond that practitioners rarely request this type of data. Many systems, and Web sites, too, simply ignore the issues of reliability and validity altogether. As one of my colleagues at the National Institute for Careers Education and Counselling said to me, it almost seems as if we should

> advise people to use more than one system as this would give them the opportunity to compare and contrast results.... This issue would be less important if the computer systems were presented as more experiential in outlook (as many of the self-help books and materials are), but to me they seem to be increasingly driven to offer scores and the big risk is that these are overvalued and are seen to be the main reason for using the system.

These are the kinds of questions practitioners should be equipped, through training, to think about.

They also need to think about the question posed at the beginning of this paper: What really would we lose if we could not use ICT? In itself, this may seem to be a reactionary question. Yet, it is important to stay critical and open to all possibilities. Nothing should be taken for granted — at least not yet. There is no automatic upward direction to technological development. Nor is ICT a blind force. People shape their history, though not in the circumstances of their own choosing, said Marx. People by their intelligent, critical use can shape the development of ICT. If guidance professionals are not among them, then the magnetic storm of 2020 may seem, when viewed from here, like a way of preserving their position in society. It would, however, be a sad end to a number of promising careers.

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